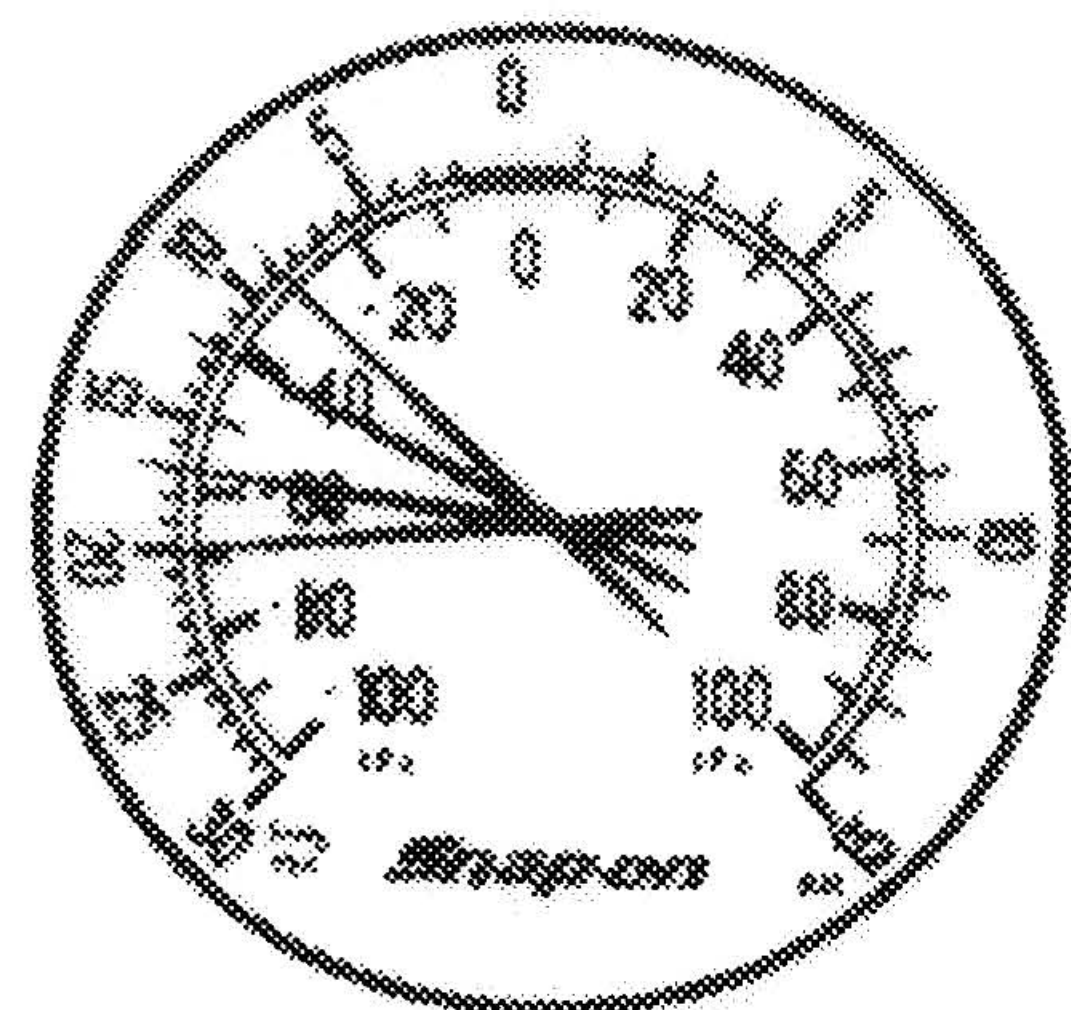
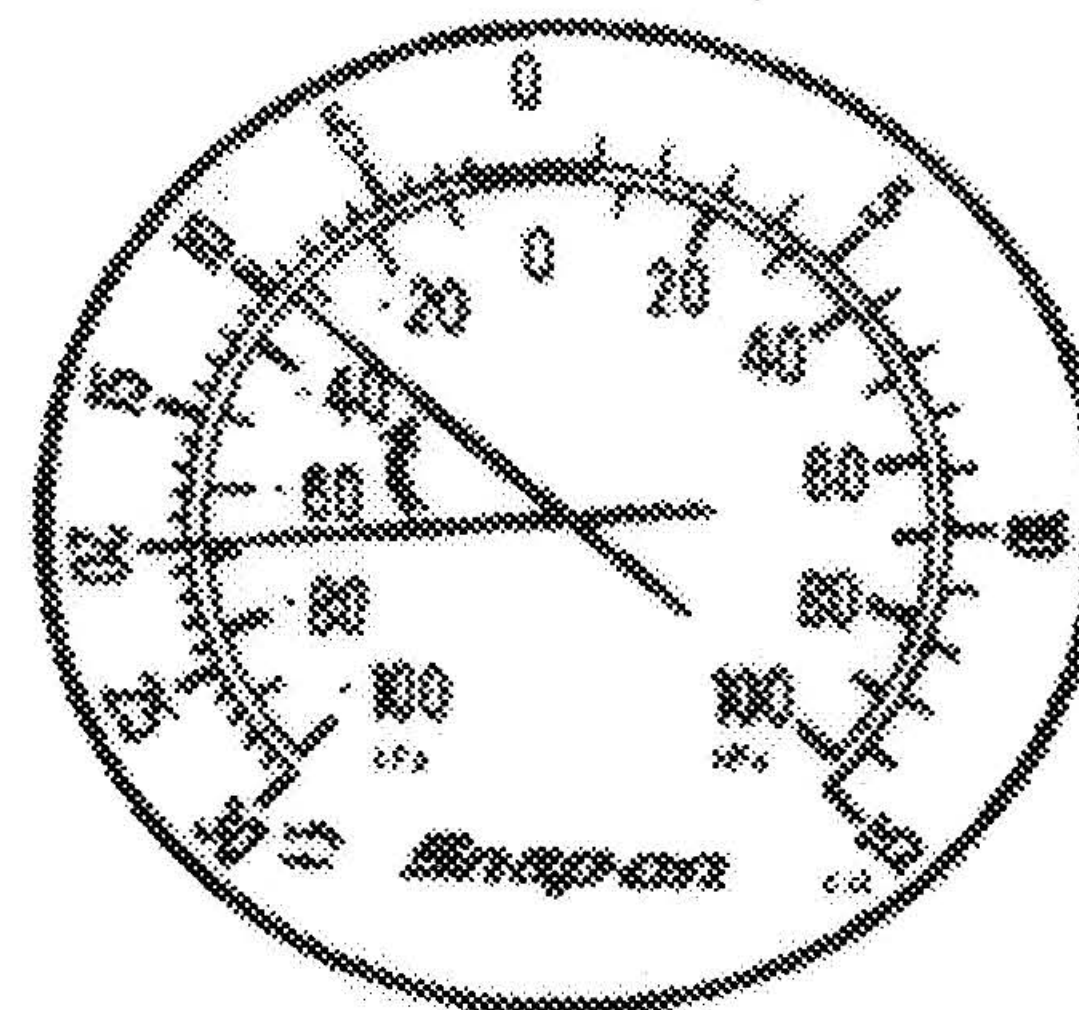




Gauge Reading: Needle fluctuates as engine speed increases.

Indication: Ignition misfire.
Leaking valve.
Weak valve spring.
Cylinder head gasket leak.

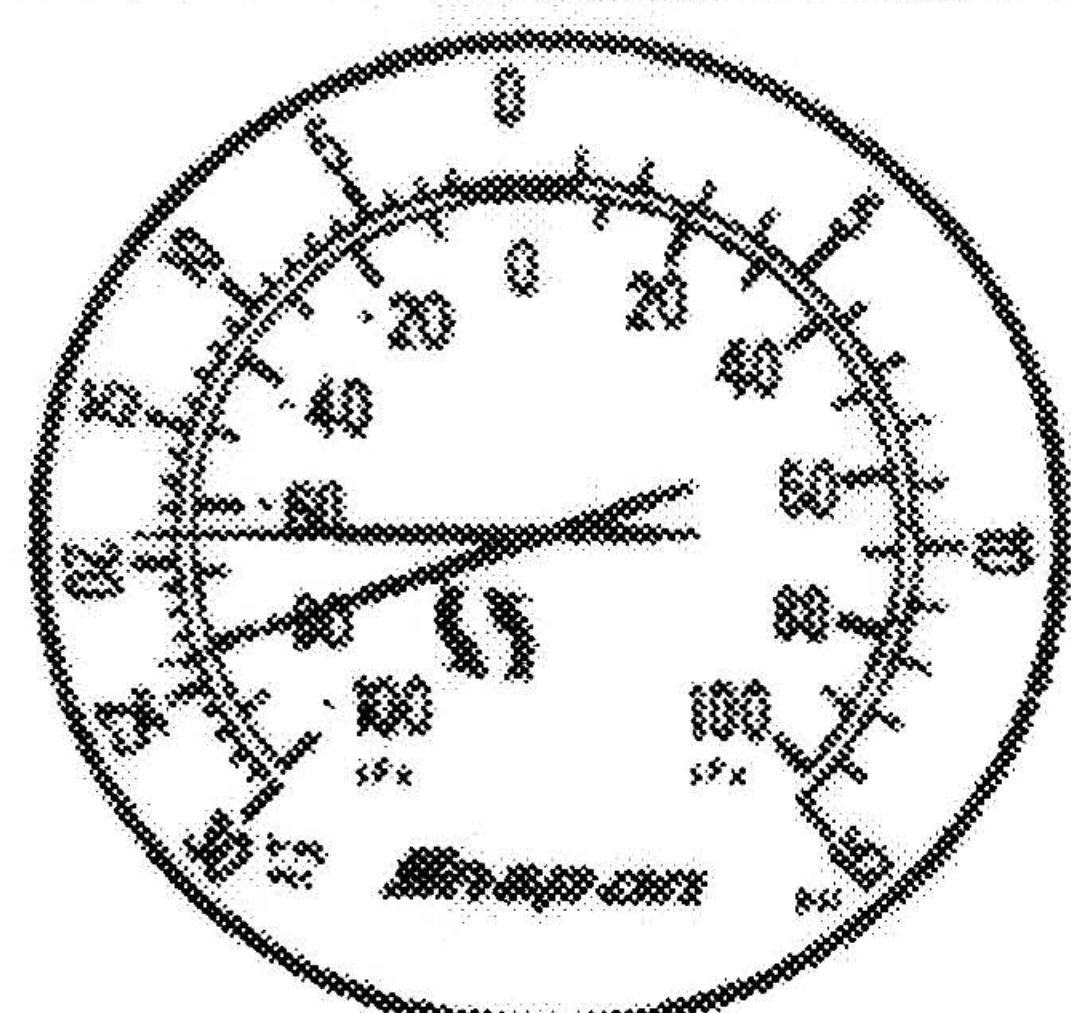


Gauge Reading: Needle in normal range with sudden regular drops to about 10 to 12 in Hg.

Indication: Cylinder head gasket leak.

Note: Drop can be as low as 5 in Hg. if leak is between two cylinders.

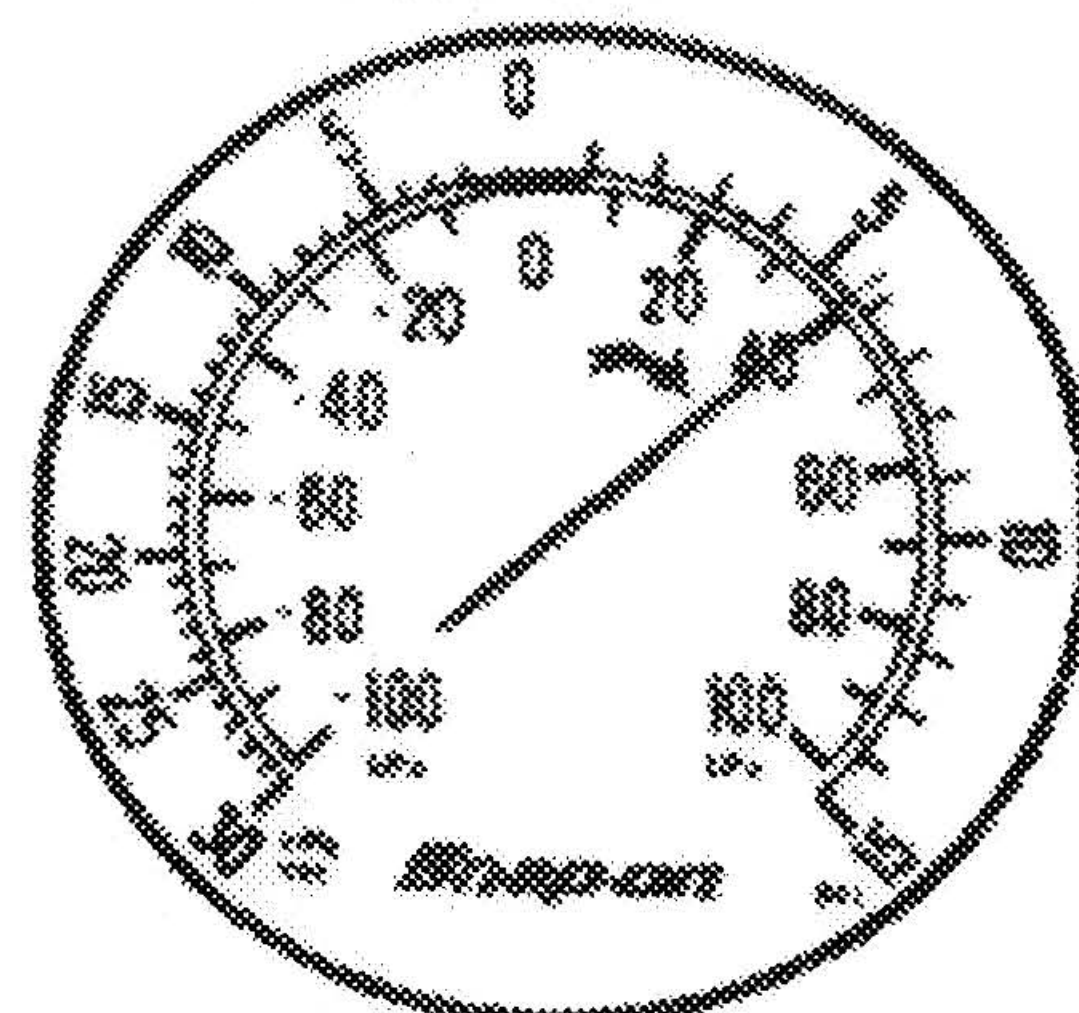
The following tests are used for excessive back pressure.



Procedure: Connect gauge to intake manifold from idle, slowly increase to 2000 rpm, then quickly close throttle.

Gauge Reading: Increases with engine speed and decreases at the same rate when throttle is closed.

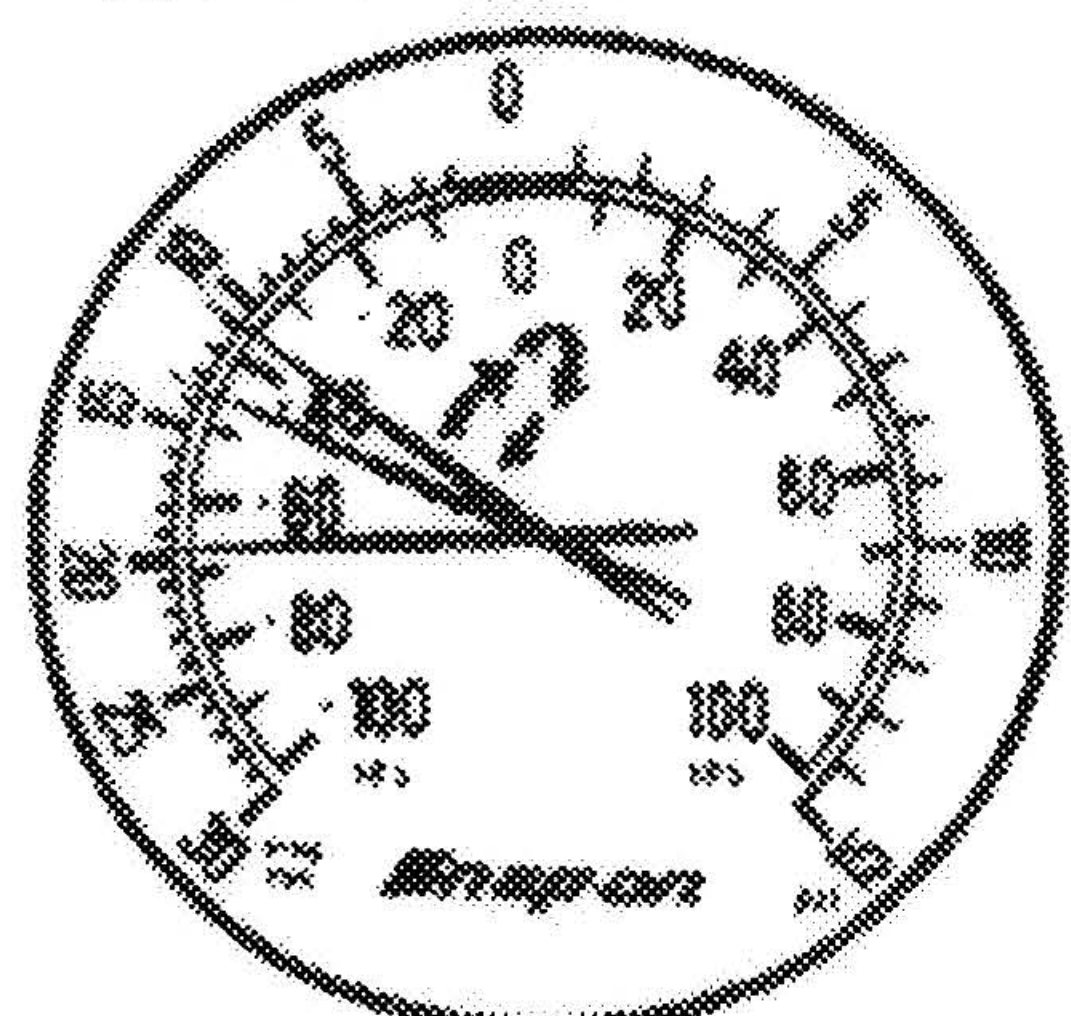
Indication: Normal.



Procedure: Connect gauge to exhaust. Engine at normal temperature. Run engine at 2500 rpm.

Gauge Reading: Less than 2.5 psi is good. More than 2.5 psi is bad.

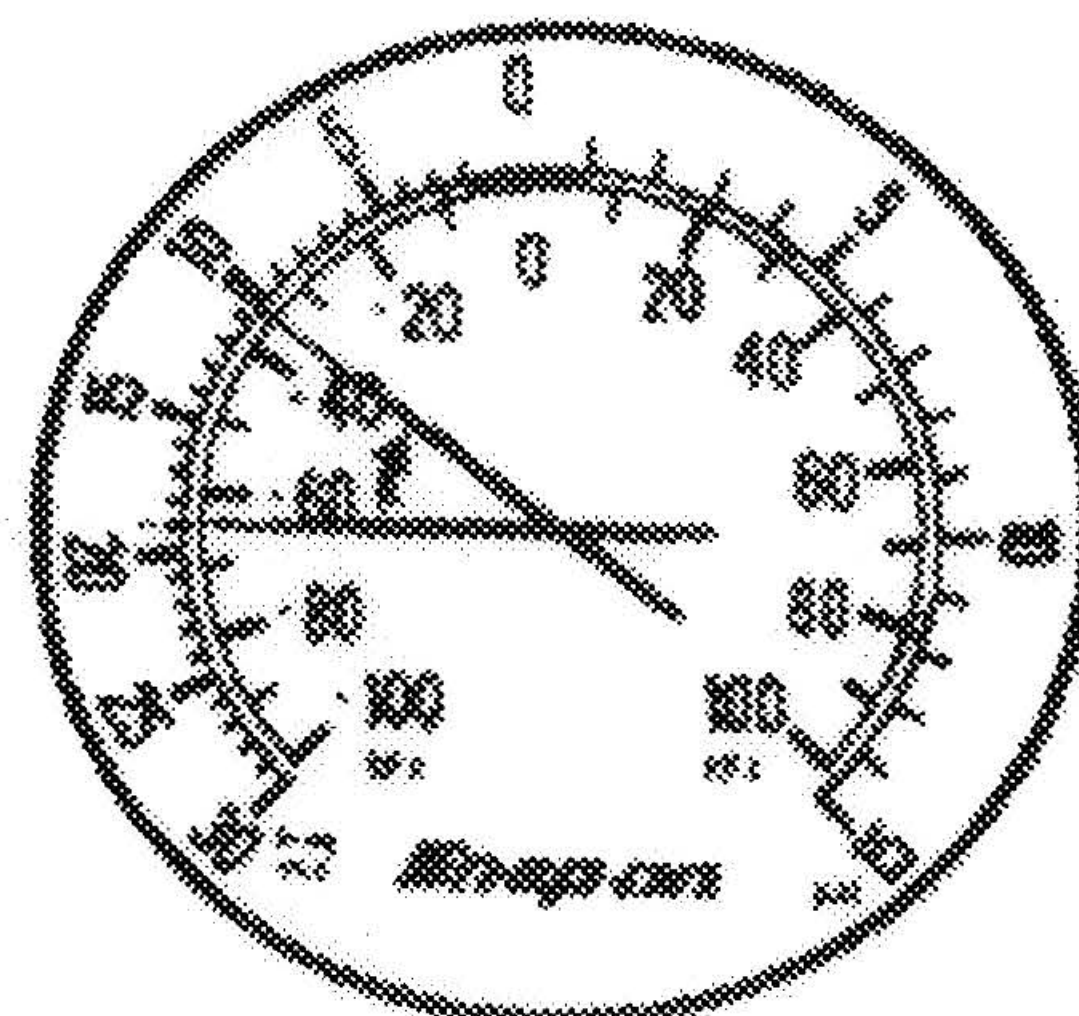
Indication: More than 2.5 psi is excessive exhaust back pressure.



Procedure: Connect gauge to intake manifold from idle, slowly increase to 2000 rpm, then quickly close throttle.

Gauge Reading: Decreases as rpm increases with a slow or jerky return when throttle is closed.

Indication: Excessive exhaust back pressure.



Procedure: Connect gauge to intake manifold. Run engine at idle.

Gauge Reading: Gradual drop in reading at idle.

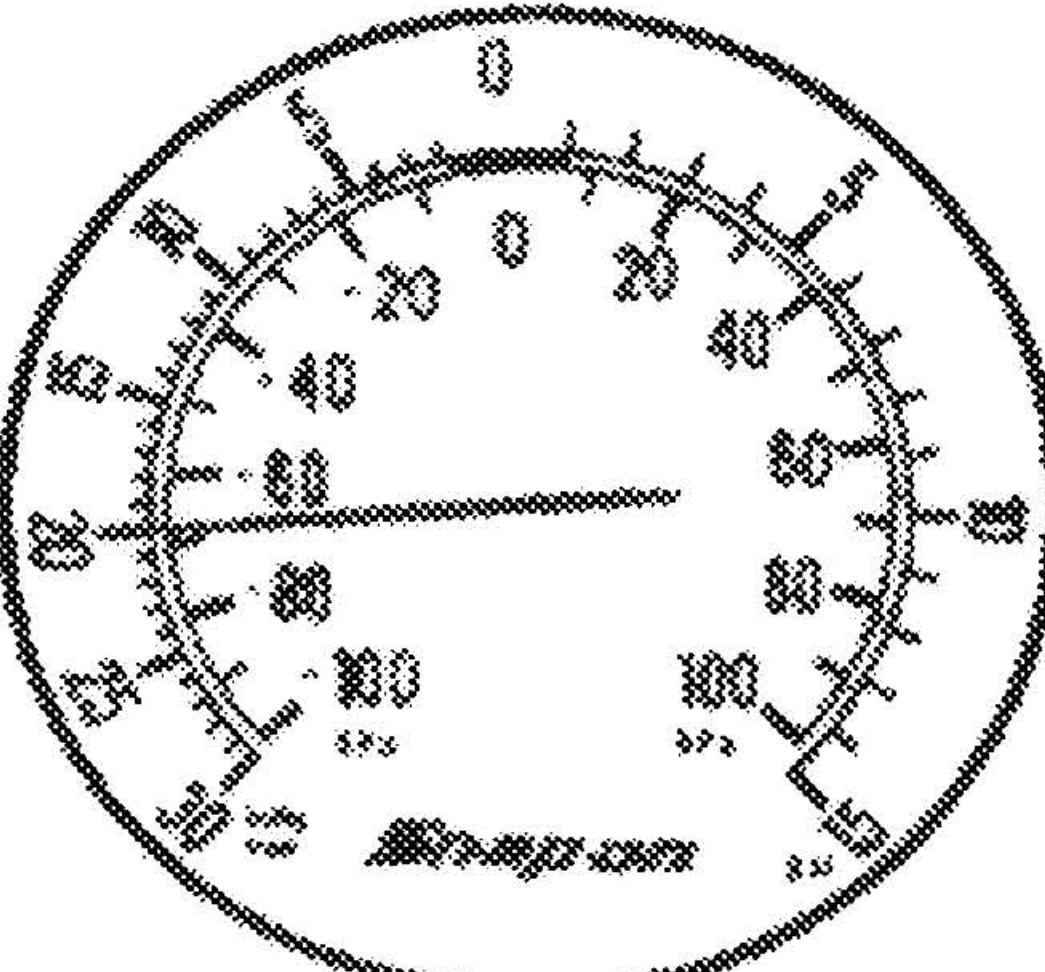
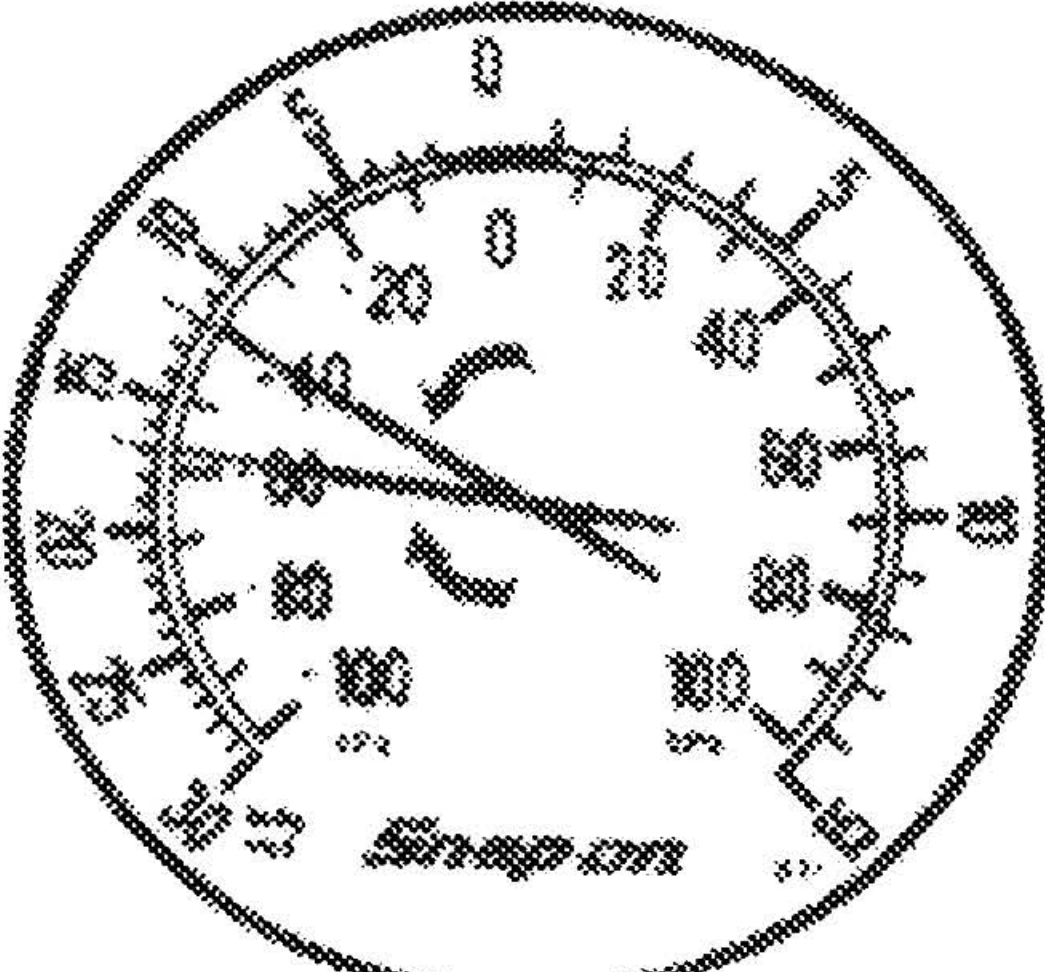
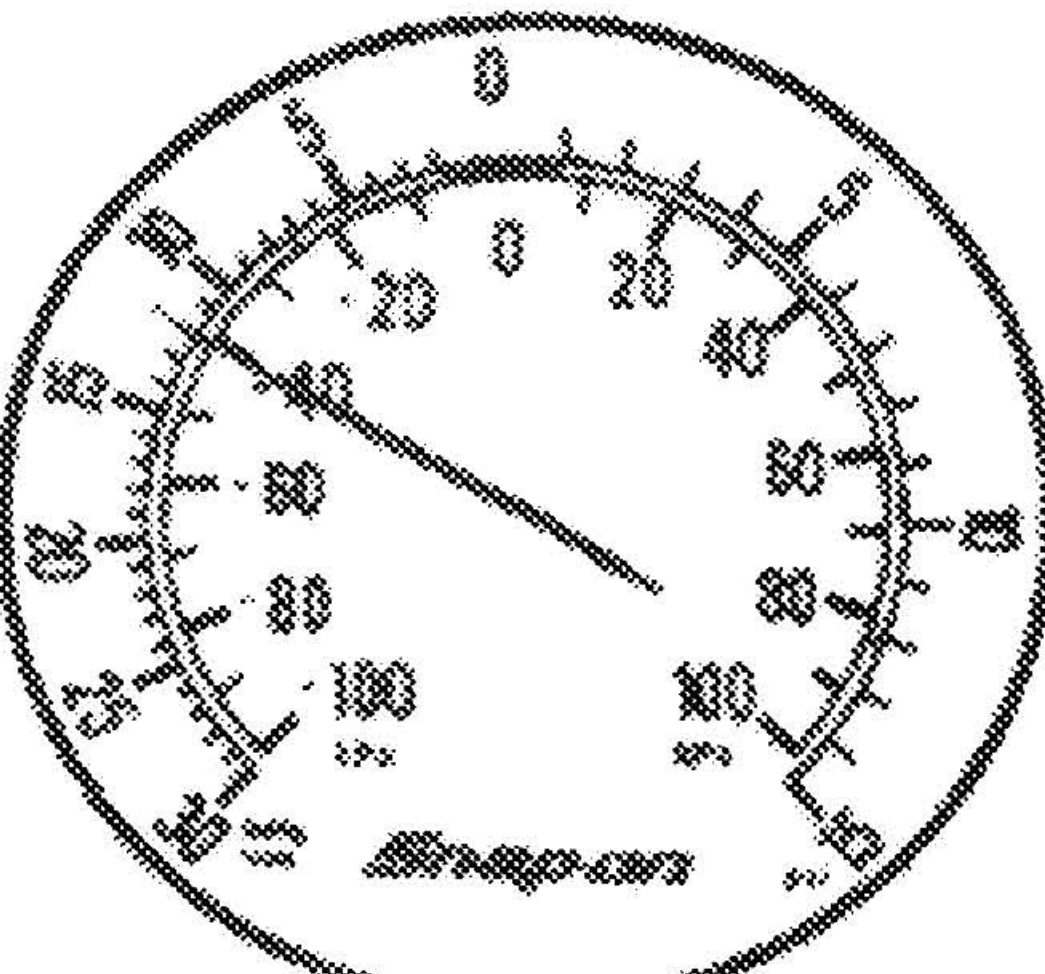
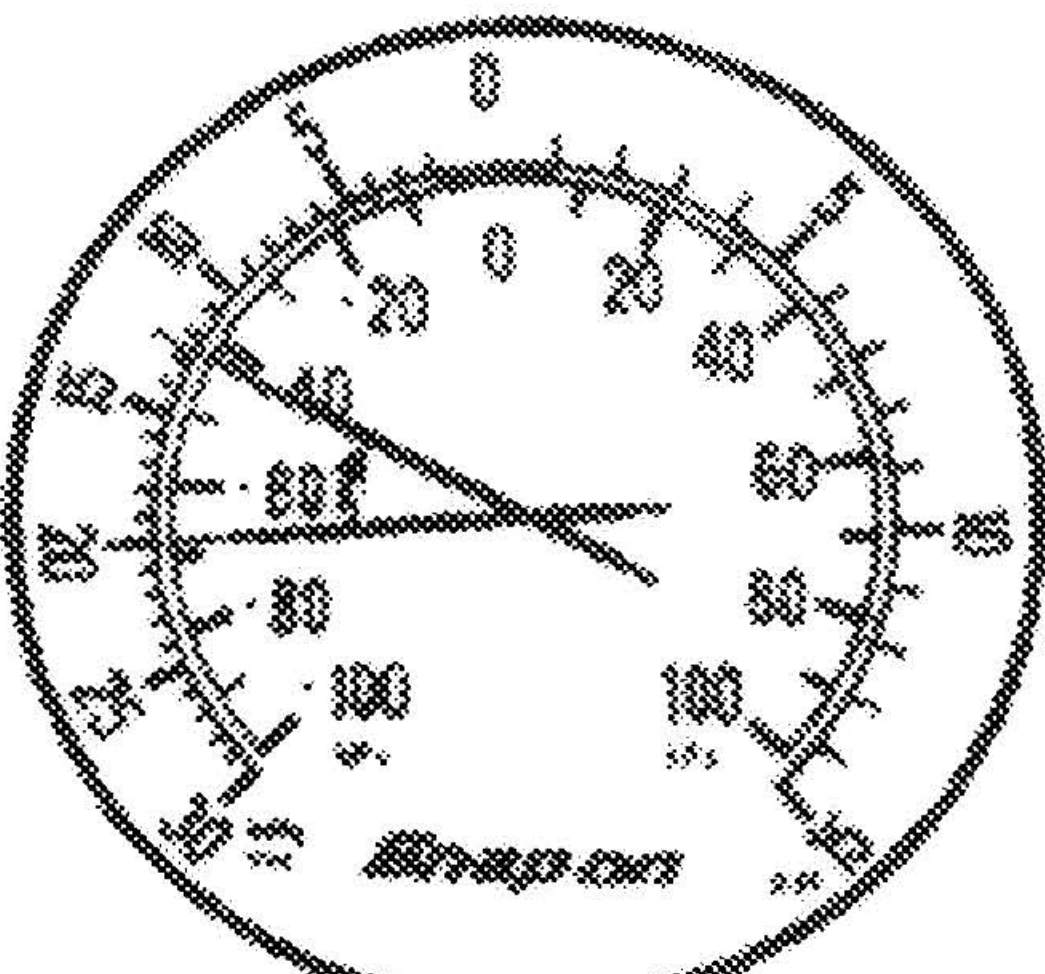
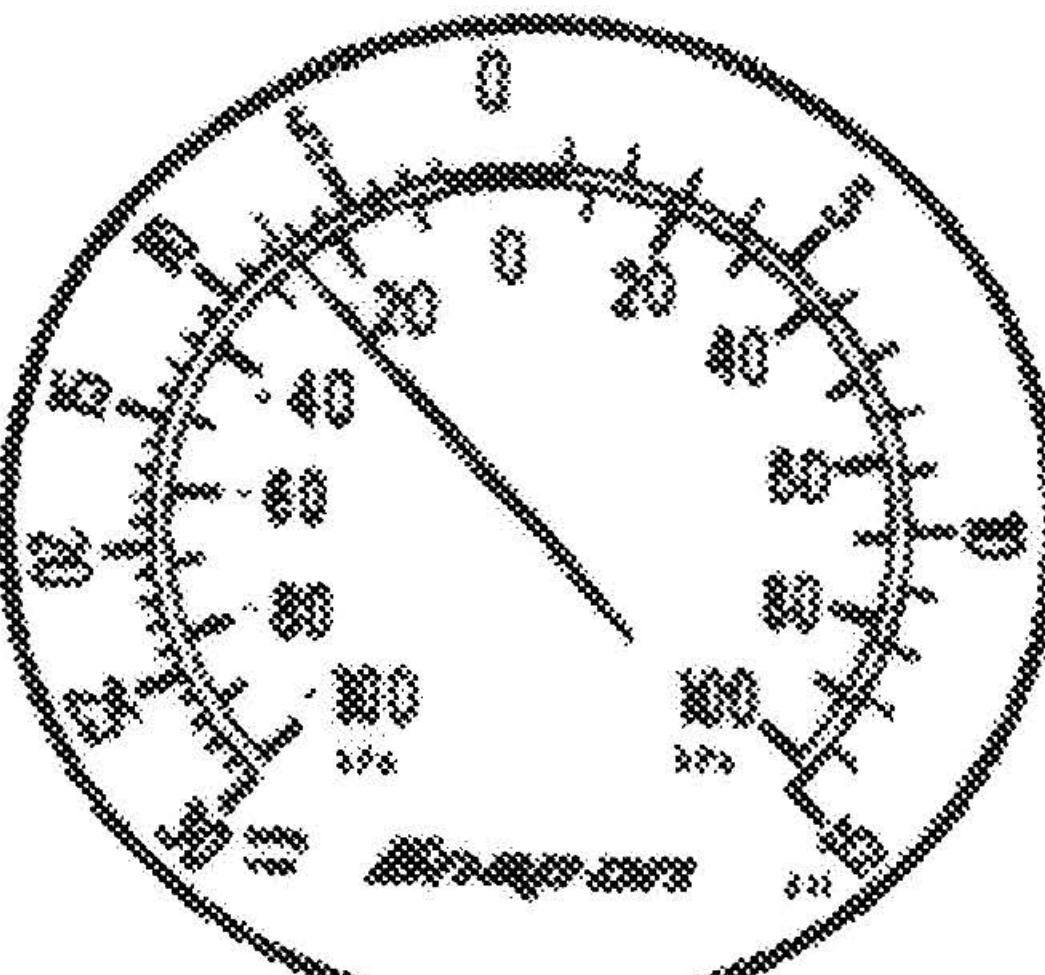
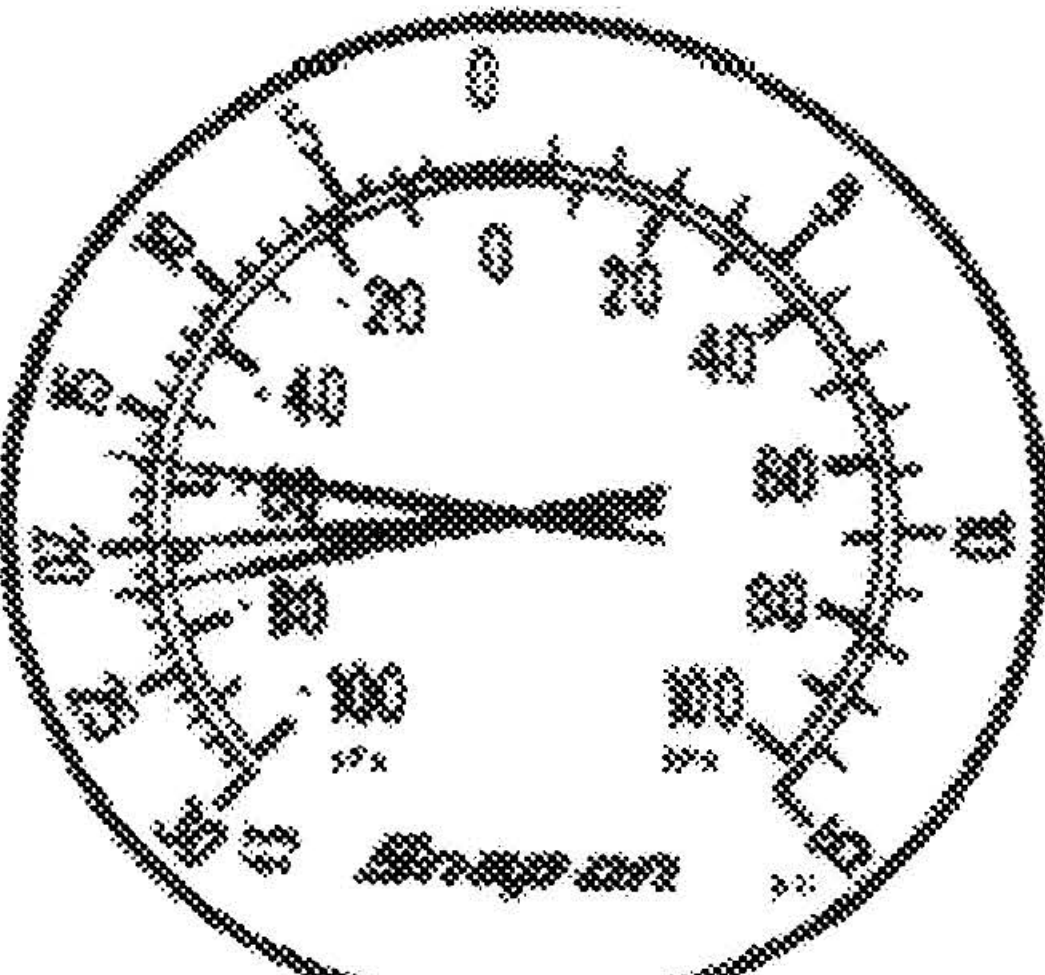
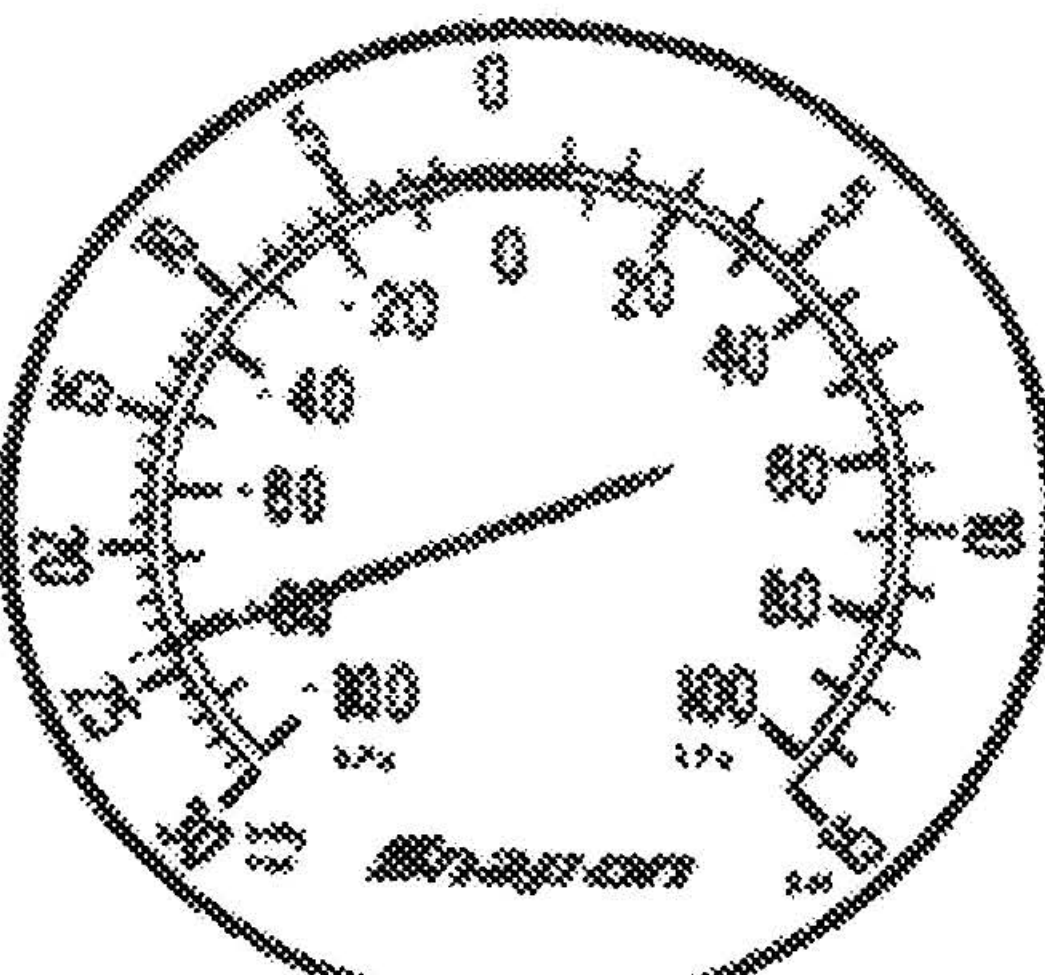
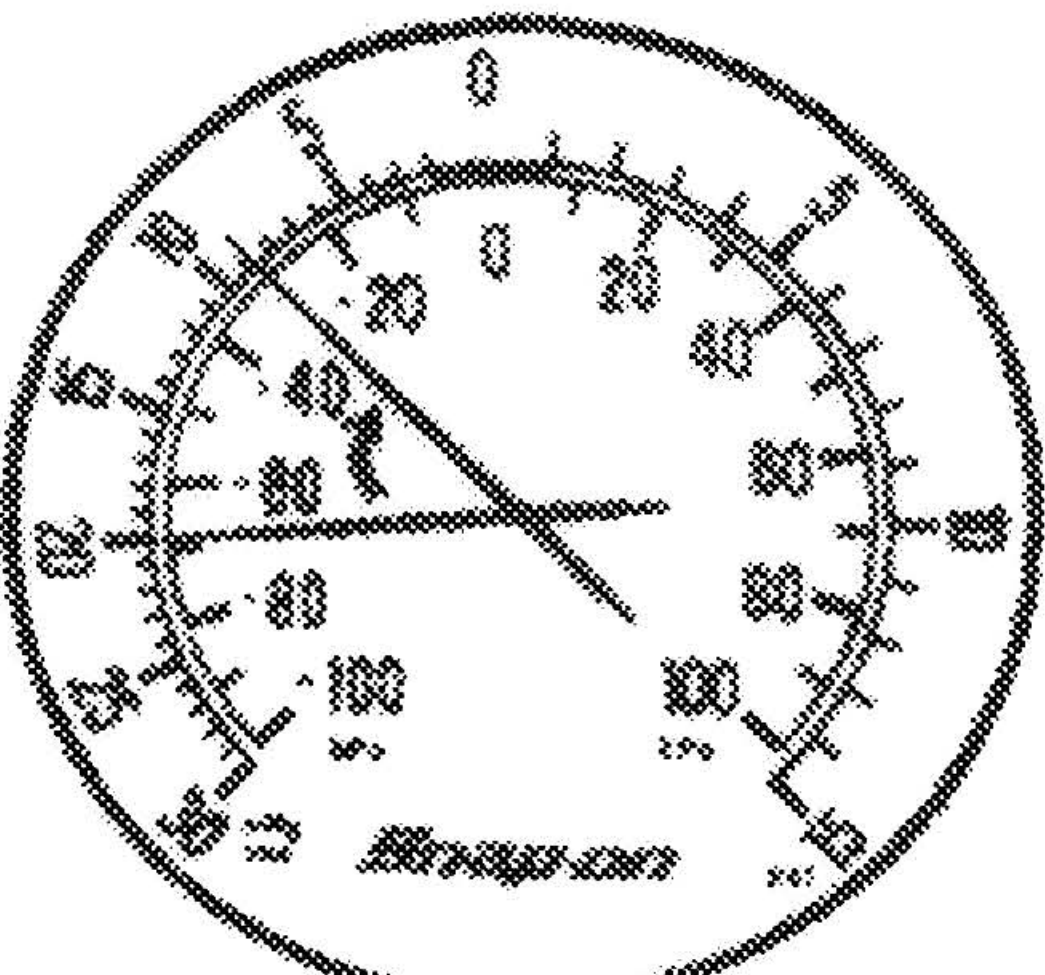
Indication: Excessive exhaust back pressure.

Read, understand and follow all safety messages and instructions on the test equipment and in the instruction manual.

Snap-on

EEPV311A

Vacuum / Pressure Gauge Set

	Gauge Reading: Needle steady and within 17 to 22 in Hg. Indication: Normal engine in good condition.		Gauge Reading: Needle drifts back and forth about 4 to 5 in Hg. Indication: Improper fuel mixture. Minor vacuum leak.
	Gauge Reading: Needle steady and within 10 to 15 in Hg. Indication: Late ignition timing. Late valve timing. Low compression (piston rings). Vacuum leak.		Gauge Reading: Needle steady with <u>intermittent</u> fluctuations. Indication: Sticking valves. Ignition misfire.
	Gauge Reading: Needle steady but very low. Less than 10 in Hg. Indication: Major vacuum leak. PCV stuck open. Defective brake booster. Note: It may be normal for engines with high performance camshafts to have less than 10 in Hg. vacuum at idle.		Gauge Reading: Needle reading in normal range but fluctuates 1 to 5 in Hg. Indication: Ignition system problem. Worn valve guides. Note: Worn valve guides tend to steady the reading with increased engine speed.
	Gauge Reading: Needle steady and higher than 22 in Hg. Indication: Ignition timing too far advanced. Restricted air intake (air filter).		Gauge Reading: Needle steady but drops at <u>regular</u> intervals. Indication: One burnt valve or faulty valve clearance. Needle drops when faulty valve operates.